No. V.

ANATOMICAL PREPARATIONS.

The GOLD MEDAL *was presented to* MR. HENRY GOADBY, *No.* 18 *South Villa, Wandsworth Road, for his Method of putting-up Anatomical Preparations.*

18 *South Villa, Wandsworth Road.*

SIR, *Nov.* 17*th*, 1841.

I AM desirous of making a communication to the Society of Arts relative to a new mode of putting up anatomical, zoological, or other preparations, rendering them available for microscopical purposes, &c.

I am in attendance with several specimens, which I should like to lay before the Committee, especially as they may not remain long in my possession.

I am, Sir, &c.

The Secretary, &c. HENRY GOADBY, F.L.S.

The method adopted by Mr. Goadby of putting up and preserving anatomical preparations is deserving of notice; first, on account of the form of, and second, the plan of making the vessels, which contain them, and, lastly, on account of the composition of the fluid in which they are prepared.

The vessels are constructed of plate-glass, and are of rectangular form, the edges of each plate having previously been ground square on pewter with emery powder. The plates are cemented together with a composition of gold-size and lamp-black, the latter ingredient being mixed with the former in sufficient quantity to make the

cement of a deep black colour. The use of the lamp-black is to prevent the gold-size from running.

The advantages of this form of vessel are, that the objects may be viewed, either by the naked eye or the microscope, without any appearance of distortion or indistinctness occasioned by the aberration of light in its passage through the curved sides of glass bottles.

The vessels for the larger specimens are made of such dimensions as to support them by contact with all the sides, and retain them permanently in the most favourable position for examination.

Many preparations are of such a form as to collapse, when suspended in an ordinary glass bottle, and conceal that part of the surface which it may be most interesting to examine. Some of the more delicate specimens are supported in the vessels at different points by threads, the ends of which pass between the edges of the glass and are embedded in the cement. The flat glasses enable the most minute specimens to be accurately examined by the microscope.

The fluid in which Mr. Goadby's preparations are preserved consists of a solution of salt, alum, and corrosive sublimate, in the following proportions, viz. bay-salt, 4 oz.; alum, 2 oz.; hydro-chlorate of mercury, 4 grains, dissolved in two quarts of boiling water.

The fluid commonly used for preserving anatomical preparations is alcohol; and the ingredients of the fluid used by Mr. Goadby have also been used by others, but singly as simple solutions. The candidate's object in combining these substances is to obtain more perfect specimens, both as to their appearance and their actual preservation; the astringent and antiseptic properties of the alum and salt tending to preserve the organic struc-

ture in a firm and undecomposed state, and the poisonous action of the corrosive sublimate preventing a species of vegetation, which frequently appears in the preparations made in the ordinary way, in the form of flocculi, which render them indistinct in form and colour, and diminish the transparency of the fluid. The cost of the fluid is less than sixpence a gallon.

In the Society's Repository is a human eye preserved in a saturated solution of salt, which was deposited by W. Cooke, Esq. in 1819, whose communication on the subject of anatomical preparations generally will be found at page 43, Vol. XXXVII. of the Society's Transactions. The specimen alluded to above appears at the present time, October 28, 1843, to be in a good state of preservation.